

AVIATION

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JANUARY 19, 1925

Issued Weekly

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The Fleet Air Force—Glenn Martin observation planes on board the battleship Mississippi

VOLUME
XVIII

SPECIAL FEATURES

NUMBER
3

THE NINTH PARIS AVIATION SALON
AIR SERVICE APPROPRIATIONS DEBATE
ITALY ORGANIZING AIR LINE TO NEAR EAST

GARDNER PUBLISHING CO., INC.
HIGHLAND, N. Y.
225 FOURTH AVENUE, NEW YORK

Entered as Second-Class Matter, Nov. 22, 1920, at the Post Office at Highland, N. Y.
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JANUARY 19, 1925

AVIATION

VOL. XVIII, NO. 3

Published every Monday

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GARDNER PUBLISHING COMPANY, Inc., Publishers

GENERAL AND EDITORIAL ROOMS 225 FORTTH AVENUE, NEW YORK

Publishing office

HIGHLAND, N. Y.

Subscription price: Four dollars per year. Single copies
are sent Canada, five dollars. Foreign, six dollars
a year. Copyright 1925, by the Gardner Publishing
Company

Issued every Monday. Forms close ten days previously
excepted on second-class matter Nov. 20, 1925, at the
Post Office at Highland, N. Y., under act of March
3, 1915.

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AVIATION

VOL. XVIII

JANUARY 19, 1925

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The Paris Aero Salon

THESE Paris Aero Salon, of which a comprehensive summary appears in the issue from the authoritative pen of John A. Ide, Technical Assistant in Charge of the National Advisory Committee for Aeronautics, offers some extremely interesting pointers on the trend of airplane design in France. First, although the exposition was international in scope, French aircraft were in great preponderance.

First of all, it is to be noted that while there were exhibited at this Salon less novelties than in past years, there was more real progress to be seen. Freshish machines were visible by their absence, and many "advanced" designs which had been shown at the previous Salon and which had seemed at doubtful practical value, reappeared in a very much re-worked form.

The second point to be mentioned is that the monoplanes are beginning to crowd out the biplane from its hitherto dominant position. The latest French tendency appears to be to rely as the monoplane form of wing arrangement for all types of ships with minor variations: full cantilever wings, strut braced or wire braced wings and "semicantilever" arrangements, that is, a large upper wing and a very small lower one. While the monoplane has always been the French type of design for cantilevers, it should be noted that the strut braced monoplane wing is a distinctly American development which suggested with the Landing fighting monoplane and which error has been perfected in the Landing Air Tacht.

In this country, where for some inexplicable reason there has always been a strong tendency to discount the value of the monoplane as compared to the biplane, particularly for high speed work, it might perhaps be well to remember this position, now that the world's comparatively speed record has been recognized by France with a monoplane.

Third, there is the very evident fact that metal construction is making considerable headway in France. While construction methods are still at great variance from one another, as a rule, French construction uses duralumin instead of steel in all structural parts, and fabric in fuselages. The lack of plywood for covering wings offers for inspection greater facility a fabric covered wing offers for inspection and repair as against a wing having a metal skin or a plywood skin is given as the reason for the preference. The short endurance use of light aluminum alloys in structural parts, on the other hand, is explained by the fact that France is one of the world's largest producers of bauxite, from which aluminum is produced, and thus can build aircraft cheaper from aluminum alloys than from high grade steels in this section which are mostly imported from England. These facts also explain why the latter country, which has no bauxite deposits, tends strongly toward steel aircraft construction. There is still another reason why France is attempting to substitute in aircraft construction aluminum alloys for timber, and that is, that timber has to be imported from North America, which is one of the few things is exportable. It is good to keep these factors in mind when

considering the relative merits of aircraft materials. One given material may be as good as another one, and yet for one particular country one of the two may be vastly superior, not for structural reasons but simply for economic or political reasons, although obvious considerations also adhere the choice.

In this country, where there are such vast natural resources of all sorts of timber applicable to aircraft construction, the relative merits of aircraft materials should carefully be examined. While the welded steel fuselage is probably the superior of the wood fuselage on account of its greater independence from climatic changes and shrinkage of construction, it is by an axiom, and is light alloys are necessarily a better material for wings than are wood and fabric, yet that on all metal plans will in every case and in every climate of the United States give better all-around service than a ship of composite construction. Considerations steadily tend to heavy and monotonous situations. This is particularly true in aircraft design and construction.

Dayton Wins

BY the time this is read by our readers Congress will probably have reaffirmed the Air Service to move McCook Field to the new site given by the citizens of Dayton.

Advocates have opposed the final decision on the moving at this time for reasons that need not be gone into. The local press that has persecuted Dayton to desire to retain the Engineering Division is fully understandable and laudable. The differences of opinion here arose largely from the national point of view considering with local pride.

It has been a satisfaction to know that in presenting the case against the moving at this time, Advocates have reflected what it behooves to be the movement opinion of the aeronautical industry, the general feeling in the Air Service outside the small group that believed in accepting the only opportunity offered, and the national opinion of many who have lived at McCook Field. Now that the matter is settled, there will be no further need for controversy on the part of Advocates.

Regarding McCook Field itself, there will probably be less and less need for criticism. In present Commanding Officer, Major Curry, is not only an able administrator but has had the great advantage of experience with the Engineering Division from without before he took over the command. With the eyes of Congress and everyone interested in aeronautical development turned toward McCook Field, it is very improbable that conditions that have caused unpleasant heretofore will be repeated.

The announcement of the New Year is bringing the Air Service under the most adverse scrutiny. It will need all the support from its friends that can be rendered. Advocates has been a severe critic of some of the activities in the past. It is to be hoped that the pressing necessity for this course is over and that there may be more harmonious action among all those who are sincerely trying to advance aerial progress.

Announcing —

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Machines will be provided at reasonable rates for students who wish to keep in practice after completing their flying training.

The school will be operated under the same safe and sane policy which has enabled us to train over 350 pilots since the war without a serious accident.

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CHARACTERISTICS OF GLIDEPADS AND SEMIPADS EXHIBITED AT PARIS AERONAUTICAL SALON DEC. 5-11, 1954

PREPARED BY JOHN DAY IDE

Technical Assistant in Charge, Natural History Committee, Los Angeles

No.	Date	Model	Type	Company	Serial No.	Status	Flight Characteristics										Performance										Crew	Date					
							Climb					Cruise					Descent					Speed							Altitude				
							Rate	Altitude	Time	Altitude	Time	Rate	Altitude	Time	Rate	Altitude	Time	Rate	Altitude	Time	Rate	Altitude	Time	Rate	Altitude	Time							
1	Boeing	737	Regional	Allegiant	2010	Active	100	10000	10	100	10000	10	100	10000	10	100	10000	10	100	10000	10	100	10000	10	100	10000	10	100	10000	10	100	10000	
2	Boeing	737	Commercial	Delta	2011	Active	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	
3	Boeing	787	Commercial	United	2012	Active	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	
4	Boeing	747	Commercial	Boeing	2013	Active	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	
5	Boeing	777	Commercial	Boeing	2014	Active	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	
6	Boeing	737	Commercial	Boeing	2015	Active	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	
7	Boeing	787	Commercial	Boeing	2016	Active	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	
8	Boeing	747	Commercial	Boeing	2017	Active	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	
9	Boeing	777	Commercial	Boeing	2018	Active	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	
10	Boeing	737	Commercial	Boeing	2019	Active	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	
11	Boeing	787	Commercial	Boeing	2020	Active	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	15	150	15000	
12	Boeing	747	Commercial	Boeing	2021	Active	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	18	180	18000	
13	Boeing	777	Commercial	Boeing	2022	Active	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	20	200	20000	
14	Boeing	737	Commercial	Boeing	2023	Active	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	12	120	12000	

[illegible]

new Looff & Olver flying boat having the Looff-Hoppe type of flexible construction instead of the usual rigid hull. The airplane will have one 450-hp. Pratt & Whitney engine instead of the two 180-hp. Hispano-Suizas used on the earlier H13.

[illegible]

The French Under-Secretary of State for Aeronautics has a remarkably interesting exhibit covering the work of various departments—the Technical, Production and Air Navigation Services. The models of the various water tanks and the full scale testing station at St. Cyr were particularly wide.

At Note—The more important of the new aircraft exhibit at the Paris Salon will be fully described in forthcoming issues of *Aircraft*.

A Canadian View on Air Legislation

1. I mention just who desires to remain anonymous, write to JOURNALIST as follows:

It is noted that the opponents of the legislation in your country claim more commercial harm than any other country in the world, and give as the reason for the lack of them in England and Canada the "red tape" in connection with getting licenses and accreditation certificates.

"I do not think that *Age Regulations* in Canada have been to any way a hindrance to bona fide commercial aviation operations. On the contrary, such firms welcome any examination of their machines which the Government requires and have always proved more than willing to carry out any strengthening or modification that is found necessary to bring their aircraft up to an acceptable standard of safety."

"The Department of National Defense may be consulted as a source as regard to aircraft that involve serious purpose to buy, and the Department's specifications for material are in accordance to documents and specifications."

"Air Regulations were primarily passed, and are at present relaxed, with the object in view of making flying safe and profitable."

New Light Steam Motor

According to the *New York Times*, Maj. James H. Miller, secretary of the Army-Navy Joint Acquisition Board, has authorized the possibility of tests being made of a new light weight, stream, power motor invented by H. Crawford, Fla.



Warrent Officer Fulcrum Bennett

a New York mechanical engineer, intended for use in airplanes and automobiles. The Pitot meter was brought to the notice of Major Beller during a visit to a New York club last week.

"I have never met Mr. Pfohl, not communicated with him," said Major Egan. "His mention was called to my attention by a New York newspaper man during a visit I made to New York last week. As explained to me, the Pfohl matter is a

lightweight steam engine for which he claims to be able to develop one horsepower per pound. If it can do that it would be a wonder. Any engine that can develop a horsepower per pound would naturally arouse the enthusiasm of any one interested in aviation—there would be the greatest motor in the world. As I understand the principle of the motor, it uses a new type of burner which utilizes No. 2 grade of

Italy Builds More Airships

Four slingshots of the Nabols submerged type are under construction in the Italian government shipyard factory at Vigoria & Valle, near Rome.

The largest of these ships, the N-3, will be 600 ft long, 80 ft wide at the master diameter, and 80 ft high, with a capacity of 1,500,000 cu ft. The power plant will consist of six 200 hp Maybach engines which will be connected in four power pairs, the stern one having two engines. The maximum speed will be 75 mi/hr and the cruising range, with full load, 20,000 mi.

Next in line is the N-2, which will have the same passenger service as the N-3, completed last year (550,000 vs. 11 capacity and 6 tons disposable load), but its construction will be considerably lightened so that a much larger useful load will be available.

In addition to these two ships there are in construction two 281,000 cu. ft. wrecksips which will be 370 ft. long, 32 ft. in diameter and 80 ft. high. One of these ships will be built for bulk chemicals work and will have two 150 hp. Caterpillar engines, while the other, designed for high speed towing, will be fitted with two 500 hp. S.P.A. engines.



The Farlow racer (430 hp, Hapacore, Laminar wing radiator on which Warren Officer Baum made the new world speed record) averaged 270.8 mi/hr.

UNITED STATES AIR FORCES

U. S. ARMY AIR SERVICE

Wilder Wright Field News

Lieut. E. J. Redhead, who was connected with Wilder Wright Field and with the Repair Depot at Indianapolis, Ind., before it was consolidated with William Wright Field, left for New York for his new station at Middletown, Pa., last. Redhead has served as Chief Inspector during some of his time and took part in many outside flights. Lieutenant Redhead's place as Chief Inspector has been taken by Lieut. H. J. Bertrone, who in turn has been succeeded by Lieut. Carl F. Greene as Station Supply Officer.

Lieut. C. E. Thomas, Jr., is now in charge of the Material Section at Field Service Section during the absence of Lieut. O. V. Pyle as the Pacific Coast. Lieutenant Thomas' place as Repair Supply Officer has been taken by Lieut. H. O. Freeman.

On Nov. 15, Lieut. C. E. Thomas, Jr., flew to Columbus, returning later in the day.

Lieut. E. F. Turner left by air on Nov. 16 for Belling Field, en route to Fort Rye, Pa.

Sergeants H. H. Mills and G. O. Emerson proceeded by air to Chicago several days ago on a cross country tour and were held up by storms and mist at their destination. They returned to this Field on Nov. 18.

Lieut. J. E. Parker of Indian Field made a brief visit to Wilder Wright Field returning by air on Nov. 16.

May A. W. Edson was appointed Commanding Officer of the Army purchased by the citizens of Dayton and donated to the United States to be used as the site of the future McCook Field. It replaces the present site of Wilder Wright Field, which had been closed since Major Borden was placed in charge.

Change of News

Five students (from United Field), one from Telling Field and one from Langley Field) arrived by air to enter the Air Service Technical School during the preceding week.

During a recent week cross-country trip to the points designated were made by the following student officers of the Air Service Technical School: 2nd Lieut. John M. Wickert with Corporal Branch, in a J4W-1, in Schoon Field, Indianapolis, Ind., and return; 2nd Lieut. Robert E. Williams with Lieut. John G. Robinson, in a J4W-1, in Scott Field, Ill., and return; 2nd Lieut. Joseph H. Hink, with 2nd Lieut. John W. Warren to South Bend, Ind., and return; 2nd Lieut. Stewart W. Towle, with Private Towler, in a DH4B, in Dayton, Ohio, and return; 1st Lieut. Charles Borden, with Sergeant Lawrence, in a DH4B, in Minneapolis, Minn., and return; 2nd Lieut. Herbert J. Stanley, with 2nd Lieut. Gilbert Walker, a B-5C-1, in a B-5C-1, in Mt. Clemens, Mich., and return.

Transporting Supplies Via Airplane

During the month of September, October and November, shipments made by air from the A. S. Supply Depot at Middletown, Pa., amounted to 3,579 lbs. These shipments consisted of airplane spare parts and clothing and were assigned to various Air Service depots. The planes in which they were transported were DH4B's and Martin Bombers.

These supplies are, of course, only a fraction of the amount transported from this Depot. It should be noted also that as planes are sent to Middletown for the express purpose of carrying supplies, but whenever a pilot makes a cross-country training flight and stops at Middletown en route, it then happens to be a shipment assigned to the particular station for which he is home and there is room in the plane, the pilot assumes the role of a freight carrier and receives a shipping ticket, which he has completed at destination and returns to the Depot.

Leake Field (P. L.) News

First Lieut. Ray A. Dean, who has functioned as post and group adjutant and commanding officer of Group Headquarters Detachment, was transferred from his post at H. Q. to assume the duties of post quartermaster, vice Capt. Alexander C. Eagle, Q.M.C., who returns to the Mainland on the next transport, account expiration lease of foreign service.

Succeeding Lieutenant Dean was Post Lieut. Richard H. Magee, from his post as Personnel Assistant, to that of Post and Group Adjutant, and C. O. of Group H. Q. Det.

Scott Field News

Major Frank H. Kennedy was the newest guest of friends at Scott Field and Belleville. He was the guest of honor at a public reception given by the Belleville Chapter of Commerce and the Rotary Club on Nov. 24. Major Kennedy also lectured to the Air Service Institute and Army School during his stay at Scott Field.

Lieut. Col. John A. Pappalardo, A.S., was the guest of honor at a luncheon given by the St. Louis Chapter of Commerce on Dec. 3.

Col. Graham Assumes Command of Rockwell Depot

Lieut. Col. Harry Graham, A.S., took over the command of the Rockwell Air Intermediate Depot on Thanksgiving Day, relieving Maj. G. W. Fitzgerald who was on temporary duty at the Depot since the departure of Maj. H. H. Arnold. Maj. Fitzgerald, upon being released of his duties at Rockwell, returned to his proper station at San Antonio, Tex. by air, picking a newly overhauled Lockheed.

Camp Nichols (P. L.) News

Post Lieut. Nida G. Harper prepared to take a trip to Leggett to look over a proposed landing field there. The municipal government has offered one and if it can be made into a suitable field this will afford to a trip there at least twice a month.

Capt. Rueschman Evans was making preparations to November to look over a landing field at Tachikawa, Japan.



Air Marshal Sir John Salmond, who has been appointed to the command of the Air Defense of Great Britain

20th Bombardment Squadron

Lieutenant Rodgers for a Martin Bomber for a B-30, now mostly at an altitude of 5000 ft. for the purpose of making Fort Monroe A.A. Batteries in testing out a new sound detection method.

Air Service Technical School

The Air Service Technical School has seven DH4B, eight C-45, three MD-1 and one Martin Bomber in commission. These airplanes are flown every day by student officers.

U. S. NAVAL AVIATION

Los Angeles in New Test

The ship Los Angeles made another successful flight on Dec. 30 to continue tests of the water-recovery system installed after her arrival here from Germany.

After leaving the ship, the plane flew the shore route on Barrington to Astoria Park. When she headed for the outer range and reached the air field she experienced difficulty in making land, so the third attempt the ground crew was able to get hold of her as shown from the ship. The team for this difficulty, officers explained today, was that the 1,800 ft. ft. was fourteen degrees warmer than the ground temperature.

Comdr. J. H. Blythe, Jr., who was in command during the test, said that the water-recovery system worked well.

Extensive Airship Operations Planned

Extensive airship operations will be undertaken with the Navy's two rigid airships, the Shenandoah and the Los Angeles, together with the airship tender Pinta, during the next few months of the year.

The purpose of these operations, as far as the Shenandoah is concerned, will be to test her usefulness as a Naval asset, and to train the personnel in the operation of the airship, operating from the Naval Air Station, Lakehurst, N. J. and with the carrier ship. The value of the Pinta, the airship tender equipped with a mooring mast, as a means of providing a mobile support airship base will be fully demonstrated.

The Los Angeles, designed as a commercial air liner, will be operated by the Navy over long distances and for extended periods as a means of showing to the American people the value of the airship as a commercial carrier and demonstrating the reliability of her service.

The Los Angeles is scheduled to make mooring tests with the Pinta in Chesapeake Bay during the first three weeks of this month, together with demonstration and mooring flights in the vicinity of the Naval Air Station, Lakehurst, the home port of both airships. On Jan. 25 a total eclipse of the sun will take place, visible in the Atlantic Coast. In order to obtain photographs of this rare natural phenomenon at the most advantageous position, the airship Los Angeles will make a flight during the eclipse, carrying scientific, camera and instrument men, and will make a series of efforts to make possible the taking of observations and photographs show the clouds. Demonstration flights will be continued with the Los Angeles Jan. 16, when the airship will undergo a five day solo aerial overhaul.

Due to a shortage in balloons, the Shenandoah will not be inflated until the latter part of February. By that time it is expected that the Station Production plant at Fort Worth, Tex., will have delivered some balloons for both airships. The shortage was caused by a showing up of production at Fort Worth, due to cold weather. Commencing the first part of March, the Shenandoah, with support and land flights, will be in operation with the results of the Fleet in the Caribbean, from March 22 to April 7. The airship tender, Pinta, will proceed to the Panama Canal after the Shenandoah was returned to Lakehurst, by April 15.

About Feb. 18, after the winter overhaul period is over, the Los Angeles will commence a series of long distance flights from Lakehurst. Bermuda will be visited by the airship during the period Feb. 18 to 28, followed by a

flight to San Juan, Puerto Rico, during the period March 3 to 7. While the Shenandoah is in Southern waters during the latter part of March, the Los Angeles will make flights to the Virgin Islands, Lakehurst, and San Juan, May 19 by flights from Lakehurst to the Panama Canal. The Pinta will be present at Bermuda, San Juan and the Canal Zone to receive the Los Angeles.

From May 19 to 29 when the Shenandoah is scheduled for both airships, to be followed by a flight by the Los Angeles to Honolulu, T. H. during the period May 30 to June 10. A three-airship flight is proposed as on other occasions in the past. The use of the Los Angeles in a flight from the mainland to England, as a demonstration of the practicability of airship and service across the Atlantic has been considered, and it is possible that a flight of this nature will be scheduled for the flight to Hawaii, if the experienced ground crew that this can be done with before.

While the Los Angeles is engaged in her long distance flights, either to Hawaii or England, the Shenandoah will continue her operations from Lakehurst, making operations with the Pinta in Chesapeake Bay, which will be continued until the end of June. During the last two days of June the Los Angeles will undergo a thorough overhaul.

Naval Air Orders

Lieut. Harvey E. Borden, det. Aircraft Station, Brevard, Fla., to U.S.S. Midway.

Lieut. Harold J. McNelly, det. U.S.S. Midway; to Aircraft Station, San Diego, det. U.S.S. Midway.

Lieut. John H. Smith (A-1), det. Naval Air Station, Lakehurst, N. J., to Astoria Station.

Lieut. John U. Gibson, det. Rear Ship, San Francisco, Cal., to U.S.S. Langley.

Lieut. John C. Cunningham, det. Naval Observatory, Wash. D. C., to executive officer, U.S.S. Shenandoah.

Lieut. (jg) Earl W. DeLong, det. U.S.S. Detroit; to Aircraft Station, San Diego, det. U.S.S. Langley.

Lieut. (jg) Edward A. Hinkle, det. Aircraft Ship, San Francisco, det. U.S.S. Langley.

Lieut. (jg) Robert W. Smith, det. Naval Academy, Annapolis, Md., to U.S.S. Shenandoah.

Lieut. Dayton Faxon (A-1), det. U.S.S. Pinta; to Rear Ship, San Francisco.

Lieut. (jg) John P. Hinch, det. U.S.S. New York; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) John G. Jones, det. U.S.S. Trenton; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) Michael H. Kennedy, det. Edgewood Arsenal, Edgewood, Md., to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) John R. Mather, det. U.S.S. Charles Anderson; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) George W. Merritt, det. U.S.S. Trenton; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) Timothy J. O'Brien, det. U.S.S. Arkansas; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) William F. Davis, det. U.S.S. James K. Paulding; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) Howard B. Blaylock, det. U.S.S. Mary; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) Robert F. Kaufman, det. U.S.S. Casper; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

Lieut. (jg) John A. Neek, det. U.S.S. Palmyra; to transport tender unit in station, Naval Air Station, Pensacola, Fla.

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At France —
24 hours Type Ten—June 1935
15 hours Type Ten—June 1935
110 hours Type Ten at 2700, full
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As shown in table for

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